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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,863	09/28/2001	Jeffrey A. Wolk	100/061110	7390
21569	7590	07/21/2006	EXAMINER	
CALIPER LIFE SCIENCES, INC. 605 FAIRCHILD DRIVE MOUNTAIN VIEW, CA 94043-2234			OLSEN, ALLAN W	
			ART UNIT	PAPER NUMBER
			1763	
DATE MAILED: 07/21/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/966,863	<b>Applicant(s)</b> WOLK ET AL.	
	<b>Examiner</b> Allan Olsen	<b>Art Unit</b> 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 9-13 is/are pending in the application.
- 4a) Of the above claim(s) 3,4 and 10-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Election/Restrictions***

Claims 3, 4 and 10-13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention or species, there being no allowable generic or linking claim. Election was made **without** traverse in replies filed on September 20, 2004 and June 6, 2005.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 1, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,224,830 issued to Harrison et al. (hereinafter, Harrison)**

Harrison teaches drilling an aperture in a first substrate layer of a microfluidic device. Harrison teaches bonding a first and second substrate layers together such that an aperture in the second substrate layer corresponds to the aperture in the first substrate layer. Harrison teaches inserting a capillary element into the aperture.

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Harrison does not teach aligning the drill with an alignment structure in the first substrate.

It would have been obvious to one skilled in the art to align the drill with an alignment structure because the skilled artisan would readily appreciate that the micro scale of Harrison's channels would necessitate very accurate drilling. As in previous Office actions, the examiner takes Official Notice that the use of an alignment structure (e.g., marking, pilot or guide hole) is a well known and widely used, fundamental drilling technique. Further discussion supporting this Official Notice was provided in the Response to Arguments section of the December 13, 2005 Office action.

**Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison as applied to claim 1 above in view of US Patent 5,722,989 issued to Fitch et al. (hereinafter, Fitch).**

Harrison does not teach etching the alignment structure.

Fitch teaches etching alignment structures in micromachined devices.

It would have been obvious to one skilled in the art to etch an alignment structure before drilling the aperture in Harrison's microfluidic device because Fitch teaches that very precise alignment can be achieved when alignment marks are created by etching (column 8, lines 7-64).

**Claims 1, 5, 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4,963,498 issued to Hillman et al. (hereinafter, Hillman)**

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Hillman teaches forming a multi-layered microfluidic device that comprises a small aperture (74) in a first layer (52) (see figure 2A and 2B). Hillman teaches the small aperture is formed by drilling (column 15, line 36). Hillman teaches inserting a syringe (i.e., capillary element) into the small aperture (column 22, lines 21-23). Hillman teaches bonding the first layer to a second layer such that the aperture, which passes through the first layer, is completely within the boundaries of an aperture in a second layer (see figure 2A).

Hillman does not teach aligning the drill with an alignment structure in the first substrate.

It would have been obvious to one skilled in the art to align the drill with an alignment structure because the skilled artisan would readily appreciate that the micro scale of Harrison's channels would necessitate very accurate drilling. As in previous Office actions, the examiner takes Official Notice that the use of an alignment structure (e.g., marking, pilot or guide hole) is a fundamental drilling technique that is well known and widely used. Further discussion supporting this Official Notice was provided in the Response to Arguments section of the December 13, 2005 Office action.

### ***Response to Arguments***

Applicant's arguments have been fully considered. With respect to Skinner, applicant's arguments are moot in view of the new grounds of rejection. With respect to Harrison, applicant's arguments are not persuasive.

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Applicant argues that aperture 67 of Harrison cannot be considered to be formed in a top surface of plate segment 61A as aperture 67 passes entirely through plate segment 61A. However, the examiner considers aperture 67 of Harrison to read upon applicant's claimed aperture that is formed in the top surface of a second substrate because this claim limitation does not effectively limit the boundary of the claimed aperture. The examiner considers Harrison's aperture, which passes entirely through plate segment 61A, to be formed in the top and bottom surfaces and through the core of plate segment 61A.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

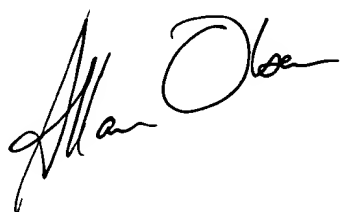
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Olsen whose telephone number is 571-272-1441. The examiner can normally be reached on M, W and F: 1-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Allan Olsen', is written over a horizontal line.

Allan Olsen  
Primary Examiner  
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